

CLAIMS

What is claimed is:

1. A inverted-F type antenna for attaching to a flat display panel, comprising:
 - 5 a ground element having the function of grounding the antenna, the ground element having a conductive plate for providing shielding protection to the flat display; and
 - a radiation element having a feed for radiating radio signals, spaced apart from the ground element and connected at one end thereof to the ground element.
- 10 2. An inverted-F type antenna for installation between a flat display and a display covering thereof, the antenna being omni-directional insofar as the display is under a operating position, the antenna comprising:
 - 15 a ground unit providing grounding function to the antenna;
 - a radiation unit for radiating and receiving electromagnetic waves with a feed thereon, the radiation unit being spaced apart from the ground unit and is connected at one end thereof to the ground unit, wherein the radiation unit and the ground unit are disposed along an edge of the flat display; and
 - 20 an extended ground layer providing grounding function to the antenna along with the ground unit and staying substantially parallel to a flat side of the flat display, the extended ground layer being sized with an effect of increasing the bandwidth of the antenna.
3. The antenna of claim 2, wherein the ground unit and the extended ground layer form a monolithic structure.
4. The antenna of claim 2, wherein the extended ground layer physically attaches to

the flat display.

5. The antenna of claim 2, wherein the extended ground layer provides shielding protection to the flat display.

6. An wireles portable computer, comprising:

5 a flat display for displaying information originating from the portable computer;

 a covering for housing the flat display;

 a supporting structure supporting the flat display on the covering;

10 an inverted-F type antenna attached to the supporting structure at an edge of the flat display, embeded within the covering and having an omni-directional radiation pattern in a predetermined plane relative to the portable computer; and

 a shielding plate attached to the flat display and connected to the antenna for grounding, wherein the shielding plate forms integrally with the antenna.

15 7. The computer of claim 6, wherein the cover and the flat display are rotatable when the portable computer is operative,